HANFORD
TANK WASTE
RECOVERY ACT REPORT
August 2011

Testing begins on field-deployable tank waste vacuum system

Testing began on an RA-funded system that uses a vacuum mounted on the end of a remotely operated arm to retrieve tank waste. The technology uses spray nozzles to break up the waste while the vacuum removes it from the tank.

"It's a real game changer in the way we remove waste from our tanks," said Tank Retrieval & Closure Technology and Systems Planning Manager Eric LaRock.

Waste transfer line upgrades near completion

Important upgrades to eight waste transfer lines in Hanford's SY Farm are nearly complete. Crews have replaced nearly 800 linear feet of pipe which will play an integral part in carrying waste from underground storage tanks to the new Waste Treatment Plant (WTP) currently under construction. The project is considered a major success story within the WRPS RA program. An early audit determined the project to be in danger of missing key deadlines, but supervisors acted quickly to pull the project back in line and crews have kept it there ever since.

With the September 30 deadline quickly approaching, a flurry of Recovery Act-funded projects at Hanford's tank farms are coming to a close. Through July, Washington River Protection Solutions (WRPS) spent $299 million in Recovery Act (RA) funds received to complete 93 percent of the planned RA work scope.

Remote sampling demo under way

Work on the first phase of a remote sampling demonstration project is now under way. The purpose of the project is to determine whether WRPS can accurately sample the waste that will ultimately be sent to the WTP. Demonstration results will help planners and engineers mitigate potential risks to the waste feed delivery system.

"We've clearly shown in our small-scale mixing work that we can sample extreme waste particulates in a manner representative of what we send down the pipe," said Project Manager Mike Thien.

Trailers provide new digs for workers

Construction is finished on a new trailer complex at Hanford's AW Farm providing office space for more than 80 tank farm workers. The new, energy-efficient complex includes a host of offices, restrooms, a large lunchroom, showers and lockers.

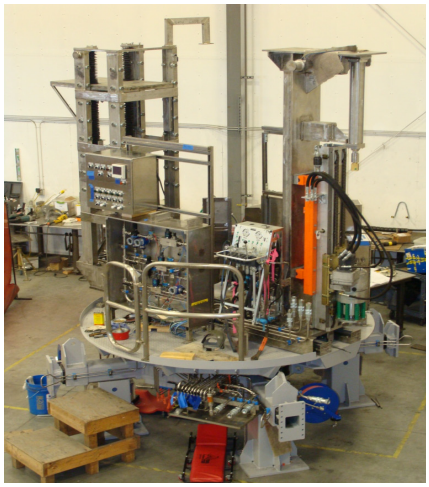
"This is a significant step for our employees," said Project Manager Mike Renfroe. "These facilities provide updated accommodations for our workforce and will help support long-term tank farm work for the duration of our mission."

New core sampler replaces decades-old equipment

RA-funded work to design and build a core sampling platform that will replace existing sampling systems is quickly drawing to a close. The platform will replace 30-year-old—and often unreliable—core sampling trucks being used in the tank farms today.

The core sampling system's circular, rotating platform houses a drill string used to collect samples from the tank, an x-ray machine to check the validity of the sample and a rack to hold the multiple casks containing samples until they can be collected and sent to the laboratory for analysis. The new equipment will help WRPS more accurately sample and characterize tank waste. Samples are needed to support waste retrieval and waste feed delivery to the Waste Treatment Plant.

"This is a high-tech tool that will help us mitigate potential safety risks and determine how best to retrieve the waste from these tanks," said Project Manager Christopher Watson.



Tank farm monitoring and control systems leap forward

As part of the RA investment in upgrading tank farm infrastructure, a 20-year-old control platform used in the tank farms has been replaced by a new state-of-the-art monitoring and control system.

"We took a 20-year leap in technology by replacing an old system that was monitored with clipboards and obsolete computers that are no longer supported by the manufacturer," said System Engineer Manager Mirwaise Aurah. "We solved a major maintenance headache, will see significant cost savings, and took another step forward in our strategic plan to support integration with the WTP."